

CLAIMS

1. A video tape recorder that sequentially forms
recording tracks aslant on a magnetic tape and records video
5 data, audio data, and auxiliary data related to the video
data and the audio data onto the magnetic tape, comprising:

data compressing means for compressing the video data
and the audio data to generate compressed video data and
compressed audio data;

10 pack unit generating means for generating a pack unit
by forming compressed video data into a block for each
predetermined number of pictures and combining the
compressed video data of the block, the compressed audio
data corresponding thereto, and the auxiliary data

15 corresponding thereto; and

a recording system that allocates data of the pack unit
to a main sector and allocates the auxiliary data of the
pack unit to a subcode sector to sequentially form recording
tracks based on the main sector and the subcode sector,

20 wherein the auxiliary data of the main sector includes
at least reproduction standard management information,
which corresponds to time management information of the
video data in a decoding mode and which is disposed in the
order of pictures of the video data, and

25 the auxiliary data of the subcode sector includes

at least the reproduction standard management information and picture type information that are disposed in the order of pictures of the compressed video data.

5 2. The video tape recorder according to Claim 1, wherein
the auxiliary data of the main sector includes,
in addition to the reproduction standard management information, time information of the video data and/or the audio data, which is disposed in the order of pictures of
10 the video data, and

the auxiliary data of the subcode sector includes
time information of the video data and/or the audio data, which is disposed in the order corresponding to the auxiliary data of the main sector.

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3. The video tape recorder according to Claim 1,
comprising:

search data generating means for generating search data from picture data by encoding within a frame in the video

20 data; and

auxiliary data generating means for generating auxiliary data for search related to the search data,

wherein the pack unit generating means further combines the search data and the auxiliary data to generate the pack

25 unit,

of the auxiliary data of the search data,
search data of the video data recorded on the magnetic
tape is recorded on the basis of the time management
information of the video data in the decoding mode, and

5 display data to be displayed with an image based on the
search data is recorded on the basis of the time management
information on reproduction and output of the video data.

4. The video tape recorder according to Claim 3, wherein
10 the search data is

tape position information indicating a position where
the corresponding video data has been recorded.

5. The video tape recorder according to Claim 3, wherein
15 the search data is

management information on a reproduction standard of
the corresponding video data.

6. The video tape recorder according to Claim 3, wherein
20 the display data is

time information of the corresponding video data.

7. A recording method for sequentially forming recording
tracks aslant on a magnetic tape and recording video data,
25 audio data, and auxiliary data related to the video data and

the audio data onto the magnetic tape, comprising:

a data compressing step for compressing the video data and the audio data to generate compressed video data and compressed audio data;

5 a pack unit generating step for generating a pack unit by forming compressed video data into a block for each predetermined number of pictures and combining the compressed video data of the block, the compressed audio data corresponding thereto, and the auxiliary data
10 corresponding thereto; and

a recording step for allocating data of the pack unit to a main sector and allocating the auxiliary data of the pack unit to a subcode sector to sequentially form recording tracks based on the main sector and the subcode sector,

15 wherein the auxiliary data of the main sector includes at least reproduction standard management information, which corresponds to time management information of the video data in a decoding mode and which is disposed in the order of pictures of the video data, and

20 the auxiliary data of the subcode sector includes at least the reproduction standard management information and picture type information that are disposed in the order of pictures of the compressed video data.

25 8. The recording method according to Claim 7, wherein

the auxiliary data of the main sector includes,
in addition to the reproduction standard management
information, time information of the video data and/or the
audio data, which is disposed in the order of pictures of
5 the video data, and

the auxiliary data of the subcode sector includes
time information of the video data and/or the audio
data, which is disposed in the order corresponding to the
auxiliary data of the main sector.